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**DISTRIBUTED OPERATIONS: THE EVOLUTION OF WARFARE IN THE  
21<sup>ST</sup> CENTURY**

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**A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.**

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**14 Feb 05**

## **Abstract**

### DISTRIBUTED OPERATIONS: THE EVOLUTION WARFARE IN THE 21<sup>ST</sup> CENTURY

The threats faced by America in the 21<sup>st</sup> Century demand new innovative tactics, technologies, and doctrine. The time to introduce distributed operations is now. Despite our pressing requirements for Operations IRAQI FREEDOM and ENDURING FREEDOM, we must continue to develop and implement the concept of distributed operations. In accordance, with the National Military Strategy, the joint force must continue to evolve and leverage the asymmetrical strengths of the American military, primarily our technological advancement and our superbly trained forces. The concept of distributed operations takes these strengths and provides today's Joint Force Commanders with an effects-based joint force capable of quickly defeating any future adversary's denial and anti-access strategy. Relevant throughout the entire spectrum of warfare, distributed operations embrace the evolution of the principles of war and operational functions in the 21<sup>st</sup> Century, thereby addressing the need for new tools to defeat today's and tomorrow's adversaries.

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## INTRODUCTION

The unparalleled strength of the United States armed forces, and their forward presence, have maintained the peace in some of the world's most strategically vital regions. However, the threats and enemies we must confront have changed, and so must our forces. A military structured to deter massive Cold War-era armies must be transformed to focus on how an adversary might fight rather than where and when a war might occur. We will channel our energies to overcome a host of operational challenges.<sup>1</sup>

President Bush's National Security Strategy directed the American military to transform in order to defeat the new enemies of the 21<sup>st</sup> Century. Prior to the release of the President's National Security Strategy, much had already been written about the necessity of transforming America's armed forces from a Cold War-era military to a 21<sup>st</sup> Century force. It was not until the attack of September 11, 2001, that the United States military establishment realized the Cold War paradigm was indeed gone. Now, all the services are in a race to transform themselves with new equipment and new ideas.

General Myers, Chairman of the Joint Chiefs of Staff, has incorporated the President's strategic guidance into The National Military Strategy (NMS) of the United States and delineated three priorities for the Joint Force to follow: win the War on Terrorism, enhance our ability to fight as a joint force, and transform the military "in stride."<sup>2</sup> The concept of distributed operations addresses all three of the Chairman's priorities while providing a significantly enhanced warfighting capability to the Joint Force Commander (JFC).

Relevant throughout the entire spectrum of military operations, distributed operations capitalize on emerging technologies inherent within network-centric warfare and leverage the superior training of small unit leaders to combat the asymmetrical threats posed by today's enemy. More than just harnessing new technology, distributed operations exploits the

evolution of the principles of war and operational functions in the 21<sup>st</sup> Century to provide the JFC with an effects-based joint force capable of quickly defeating an adversary's denial and anti-access strategy. With multiple, distributed teams maneuvering on the battlefield, the JFC possesses the ability to pursue various courses of action against the enemy, simultaneously and in parallel. Utilizing stealth, multiple axes, precision weaponry, and superior information, the JFC can target and destroy the enemy's most critical assets or influence the enemy's will through unconventional means, thereby achieving effects orders of magnitude greater than the resources applied against the enemy. The capability to garner greater effects with even fewer assets is indicative of the evolution of warfare and a goal set by the Chairman for the Joint Force in the 21<sup>st</sup> Century. This new operational concept also addresses another of the Chairman's concerns – complacency.

“We cannot afford to let our recent successes cause us to lose our focus or lull us into satisfaction with our current capabilities.”<sup>3</sup> Our tactical and operational successes in Iraq and Afghanistan must not deter us from continuing to experiment with new concepts, tactics, techniques, and procedures. America's enemies have had over a decade to observe and assess our strengths and weaknesses during numerous operations throughout the world. The inability to defeat our conventional military strength has forced our enemies to use asymmetrical means to attack us. Small, dispersed units, using the Internet and couriers for command and control, characterize the current Global War on Terrorism. These forces operate in ‘contested zones,’ consisting of large, sprawling urban centers and congested littorals, and in lawless tribal areas within the Third World.<sup>4</sup> Professor Thomas Barnett referred to this area as the Non-Integrating Gap in his 2003 Esquire Magazine article.<sup>5</sup> Simultaneously, the specter of a resurgent China - armed with a large, modern, conventional

force - lingers on the horizon as a possible threat to American interests in the Pacific. These two extremes constitute the operational environment faced by Joint Force Commanders in the 21<sup>st</sup> Century; an environment that the concept of distributed operations is designed to successfully address.

Arguments have been made about the viability of developing ‘radical’ new concepts in the face of our current commitments for Operations ENDURING FREEDOM (OEF) and IRAQI FREEDOM (OIF). Without a doubt, it is difficult to divert troops, equipment, resources, and energy to an experimental concept when we face real enemies today. However, this is a shortsighted attitude that may cost us in the end. Our enemies will continue to adapt and so must we. It is crucial to our nation’s existence that we must be ready to fight the future wars of the 21<sup>st</sup> Century, not those of the late 20<sup>th</sup> Century.

### **THE CONCEPT**

In a July 2004, *Marine Corps Gazette* article, Brigadier General Schmidle, the former Director of the Expeditionary Force Development Center, defined the Marine Corps version of distributed operations as “characterized by the physical dispersion of networked units over an extended battlespace. Battalion to squad sized formations can conduct such operations.”<sup>6</sup> The article went on to add that the ability to conduct distributed operations would be an additive capability to the infantry battalions within the Marine Air Ground Task Force (MAGTF).

The main tenets of distributed operations are: 1) fully networked units utilizing technology capable of providing a common operational picture (COP), 2) physically dispersed units scattered throughout the battlefield, 3) rapidly employed joint fire support assets through a compressed time-sensitive targeting process. The first tenet of distributed

operations is intimately tied to future technological advances. The ability for all distributed units in the field to coordinate their actions is dependent on knowing the precise locations of their enemy and other friendly units based on shared knowledge, known as a COP. A COP provides the JFC a greater situational awareness of the battlespace and allows him to flood the battlefield with numerous distributed units able to conduct disparate yet, synchronized operations over a noncontiguous and nonlinear battlefield. Able to make rapid adjustments as the situation changes via the COP, the JFC can use the increased number of maneuver elements gained through distributed operations to overwhelm an enemy's ability to react through superior operational tempo, speed, and maneuver.<sup>7</sup> Without the precise shared knowledge provided by the COP, a distributed operation quickly devolves into a constellation of uncoordinated and ineffective units, vulnerable to the enemy, and operating with an increased chance of fratricide.

The second tenet will require intensive training for infantry units and a greater reliance on small unit leadership, especially noncommissioned officers (NCOs). Although the military has always prided itself in the ability to develop leadership and foster maturity within its young servicemen, the nature of operating in small units scattered throughout the battlefield requires a significantly higher level of maturity and skill level than is usually found in a conventional infantry unit. Decisiveness, flexibility, adaptability, and intelligence need to be the hallmarks of the new distributed Warrior. More akin to his Special Operations Forces (SOF) brothers than the infantrymen of the 20<sup>th</sup> Century, the distributed Warrior will need to make critical, timely decisions while miles away from any officer. The 'strategic corporal' will exist in each unit conducting distributed operations. Only formalized



education, intensive training, and a tough screening process can assure the right NCO is selected to lead.

The third tenet of distributed operations requires a capability that normally resides no lower than the company-level within the Marine Corps and the U.S. Army. Forward Observers and Joint Tactical Air Controllers (JTACs) control fires in support of the JFC's overall plan. The various services have requirements that demand only certain officers or specially qualified enlisted men can control fire support.<sup>8</sup> This paradigm will definitely have to change if each distributed unit can utilize timely fires in support of their mission.

The concept of distributed operations to many does not seem very innovative. SOF units during OEF in Afghanistan and again during the decisive combat phase of OIF operated independently throughout the battlespace. Although these units utilized technology to maintain situational awareness with higher headquarters they did not possess a complete picture of the battlefield nor did they maintain contact with other 'regular' army and Marine units, especially during OIF. In fact, a section of Marine AH-1W attack helicopters accidentally attacked a SEAL unit because of a lack of communication and the lack of a COP. There were also numerous incidents in Operation DESERT STORM of fratricide caused by confusion that could have been alleviated by a COP. Warfare will only continue to evolve into battles between small units on an ever larger battlefield.

The lethality of and precision of today's weapons, aptly demonstrated in OIF and OEF, revealed the futility of massing large, conventional formations in force on force engagements against the United States. Future adversaries will attempt to negate our superior weaponry, especially airpower, by dispersing their forces and increasing the difficulty in targeting them in a timely manner, or even at all. To confront the challenge of

these smaller dispersed enemy forces, the JFC must increase his number of maneuver forces on the ground to find, fix, and destroy the enemy.

The trend of dispersed forces can be traced all the way back to Napoleon, and the development of the corps system. Napoleon's watchword of "march dispersed, fight united" led to the splitting of his Grande Armee into multiple corps in order to facilitate movement prior to battle.<sup>9</sup> During the American Civil War, both sides modified Napoleon's corps system by further dividing their corps into divisions, capable of independent action and maneuver on the battlefield. The rapid advancement of weapons at the turn of the 20<sup>th</sup> Century, and the accompanied increase in killing power, made massed, closely-packed infantry formations suicidal by World War I. Units of maneuver on the battlefield became smaller and smaller until by the end of World War II, the rifle squad became the universally recognized foundation for all infantry units. Despite ever-smaller maneuver units, their 'frontages' have dramatically increased due to the lethality of their organic and supporting weaponry. Since World War II, the American military has steadily increased the capability of the basic infantry squad with greater firepower, mobility, and communications. Today's infantry squad usually possesses two or three light machine guns, two or three grenade launchers, and an intra-platoon radio for each man. A 21<sup>st</sup> Century distributed operations squad has the power of artillery, rockets, Close Air Support, and Naval Surface Fire Support just a radio call away in addition to real-time COP. This tremendous increase in capability, without a corresponding increase in manpower or support requirements, provides the JFC a more capable force in which to counter the looming threats of the 21<sup>st</sup> Century.

## **WHY SHOULD THE JOINT FORCE CONDUCT DISTRIBUTED OPERATIONS?**

Why should the services pursue the development of the distributed operations concept? One simple reason, we must be prepared for the next war. The current situations in Iraq and Afghanistan have swung the tactical and operational pendulum towards counterinsurgency and Support and Stability Operations (SASO). In addition, the budgetary requirements for reconstruction of Iraqi and Afghan infrastructure, day-to-day operations in the CENTCOM Area of Responsibility, the recapitalization of military equipment worn out quicker than planned, and the increased personnel tempo place tremendous burdens on the current force. These burdens are manifesting themselves in current recruiting problems within the Army Reserves and the National Guard and the beginnings of reductions within the defense budget for the procurement of future weapon systems and advanced technologies.

America has a long and ignoble tradition of not being prepared for the next war. Two glaring examples are the Korean and Vietnam conflicts. The post-World War II draw down of forces and over reliance on nuclear weapons left America with an insufficient and poorly trained force to protect its interests. When North Korea invaded South Korea in 1950, America's lack of vision and preparation quickly became apparent with the Task Force Smith debacle and the crisis of the Pusan perimeter. Vietnam was another lesson in poor planning and preparation. In the years leading to the deployment of regular forces in Vietnam, America built a large standing army equipped and trained to combat the Soviets on the plains of Germany. Although a few special operations units were created before the war, such as the Army's Special Forces and Navy SEALs, the military largely fought the communists with regular forces. The communists countered America's superior conventional forces, asymmetrically, with guerrilla and insurgency tactics, leading eventually to a strategic defeat

of the United States. Despite suffering huge casualties, the communists remained steadfast and prevailed against America's flawed strategy of attrition. The proliferation of weapons of mass destruction no longer allows America to be unprepared for war as exemplified by the above cases. By providing the JFC with new critical capabilities to defeat future adversaries, the distributed operations concept is part of the military's transformation and readiness for the conflicts of the 21<sup>st</sup> Century. The concept is vital to guarantee that the lessons of the past are heeded.

Distributed operations provide the means for a joint force to exploit America's military strengths to attack our enemy, whether they are an unconventional or a conventional force, through asymmetrical methods. The superiority of our technology and training provide us asymmetrical capabilities to attack our enemies' critical vulnerabilities. The advantage of superior information and the ability to disseminate knowledge, not just intelligence, to the squad-level allows us to set the tempo of operations and dictate the pace of engagements.<sup>10</sup> This superior knowledge coupled with superbly trained and equipped infantrymen, dispersed throughout the battlefield, will overwhelm the enemy's decision-making ability and disrupt their tempo. The shock of multiple, dispersed units acting in unison along the entire depth and breadth of the battlespace will paralyze an adversary's operations, shatter his cohesion, and enable decisive results with a relatively small number of troops.<sup>11</sup>

Because of the size of the force employed, the capabilities of the force, and its focus on employing asymmetrical means, a distributed operation is an inherently effects-based concept. The distributed force can avoid the enemy's surfaces, such as battle positions and hard points, through maneuver, and strike at the enemy's gaps, such as unit boundaries or

weak formations, with organic weaponry or by controlling supporting precision fires.

Operating deep inside an enemy's territory, the units can search for and hit the High Value Targets and High Payoff Targets that will have the greatest effect, while creating confusion and chaos on the battlefield. At the tactical and operational level, distributed operations fulfill the requirement for an effects-based, "expeditionary joint force capable of conducting non-linear operations that are simultaneous, distributed, and parallel" for the JFC in the 21<sup>st</sup> Century.<sup>12</sup>

### **ADDRESSING 21<sup>st</sup> CENTURY WARFARE**

In Joint Publication 3-0, Doctrine for Joint Operations, economy of force is defined as "the judicious employment and distribution of forces. It is the measured allocation of available combat power to such tasks as limited attacks, defense, delays, deception, or even retrograde operations in order to achieve mass elsewhere at the decisive point and time."<sup>13</sup> In the age of the all-volunteer force, tremendous worldwide commitments, and bitter political discord, this principle of war has mutated into the use of minimal forces to successfully achieve a desired objective, whether the mission is a secondary goal or the main effort. The constantly revised and consequently approved troop level for the overthrow of Saddam Hussein during OIF and the low number of troops used in Afghanistan are clear examples.

The wide range of possible adversaries today, from traditional conventional foes such as North Korea and China to non state actors, such as international terrorist organizations, has altered the long-standing national military strategy of capably handling two major theater wars into what is now referred to as the 1:4:2:1 strategy. Today, the National Military Strategy (NMS) of the United States defines the role of the military as a) defend the homeland (1), b) deter aggression in (4) critical regions, c) swiftly defeat enemies in (2) of

the four critical regions, and d) win (1) of the two conflicts decisively.<sup>14</sup> Additionally, the NMS recognizes the unconventional nature of possible adversaries to “take advantage of ungoverned space and under-governed territories from which to prepare plans, train forces and launch attacks.”<sup>15</sup> In the face of these incredible challenges, the United States must field a joint force capable of accomplishing more with less while achieving the desired effects; a modification to the principles of war for the 21<sup>st</sup> Century – the ‘new’ economy of force.

Adhering to the ‘new’ economy of war, distributed operations provide a JFC with a number of capabilities. A properly equipped distributed unit could act as a JFC’s forcible entry option. Whether inserted by parachute, aircraft such as the V-22, or sea borne means, the distributed unit could quickly begin shaping the battlefield through reconnaissance, control of joint fires, or direct assault of enemy positions; defeating the adversary’s denial and anti-access strategy. These capabilities will allow the JFC to better employ his limited SOF assets for only the most critical missions such as strategic, persistent reconnaissance, direct action, or foreign internal defense.

Inherently expeditionary in nature, forward deployed distributed units will provide the JFC with a quick reaction force capable of quickly neutralizing a situation before the enemy can prepare or adapt; all conducted in-stride, without a slow, laborious build-up phase. The ability to react early, with in-theater assets, enables the JFC to control a situation without the need for external forces and with limited friendly casualties. If unable to handle the situation, a distributed unit could quickly transition into an enabling force for follow-on conventional units by creating ‘lanes’ within the battlespace for the reinforcements. Similar to advance force operations conducted in prelude to an amphibious landing, a distributed unit

could clear an adversary from an area, forming a cleared 'lane' or creating a diversion and confusing the enemy to the exact location of the landing zone, drop zone, or beach.

The principle of mass is closely linked to the 'new' economy of force and is a vital component of distributed operations. The keys to massed effects in the 21<sup>st</sup> Century, as stated by the Vice Chairman of the Joint Chiefs of Staff and his Joint Requirements Oversight Council, are knowledge, maneuver, and precision engagement.<sup>16</sup> With technology as a conduit, the United States can leverage its traditional superiority in information operations and precision weapons to achieve massed effects by focusing combat power, despite inferior numbers on the battlefield. A distributed unit acts as a force multiplier by aggressively applying combat power asymmetrically and achieving massed effects. Just as a small terror cell generates effects far in excess of its numbers, due to the shock and violence of its actions, so too can distributed units.

Intertwined with the principle of mass is the principle and operational function of maneuver. Maneuver in fact is the bedrock of current doctrine for all the services. Without maneuver on the battlefield, we expose ourselves to the enemy's fires and yield the initiative to him. By its very nature, a distributed unit survives through maneuver and exposes the enemy's vulnerabilities to attack either through reconnaissance or by forcing him to displace in order to avoid an untenable position. If an adversary attempts to mass his forces to counteract our maneuver, he exposes himself to our joint, precision fires. If he disperses to decrease his vulnerability to our fires, he becomes vulnerable to our distributed units if they 'swarm.'

Swarming is a maneuver in which the distributed unit coalesces at a predetermined point and attacks, akin to a beehive or German U-boats and their wolf pack tactics during

World War II. Swarming requires much coordination in order to prevent fratricide and redundancy of effort, but technology can mitigate the risks. A netted distributed unit will have the necessary information via a COP and over the horizon communications to successfully command, control, and coordinate a swarming maneuver. If the situation or terrain did not support a swarm-type of attack, the unit could unite and fight conventionally or maneuver to expose the enemy to attack by a conventional unit. Used judiciously, a distributed force employing unconventional tactics, such as swarming, provides the JFC the ability to radically change the nature of the battlespace.

Conversely, by scattering the distributed unit, the battlefield is expanded and the enemy's defensive *and* offensive problems are magnified. For example, during Operation DESERT STORM, a large distributed unit inserted into the Euphrates River valley at the onset of Phase IV (ground invasion) would have effectively sealed-off the Kuwaiti Theater of Operations, forced the Iraqis to deal with a nonlinear operation behind their lines, and provided vital reconnaissance and targeting against retreating Republican Guard and regular army units.<sup>17</sup> Although the amphibious demonstration by two embarked Marine Expeditionary Brigades fixed eight Iraqi divisions to defend against an assault from the sea, the Iraqi anti-access strategy (sea mines, anti-ship missile sites, and beach defenses) prevented the Marines from more effective utilization. The amphibious demonstration was a consequence of the Iraqi denial strategy, not a pre-planned result of the JFC.<sup>18</sup> Had the Marines been capable of distributed operations, a portion of this 17,000-man force could have been used to create a noncontiguous area of operation near Basra instead of floating in the Persian Gulf for the duration of the war. Due to the extensive reporting and documentation of America's limited mine warfare capability and problems in Operation



DESERT STORM, future adversaries may attempt to employ the same anti-access strategy as the Iraqis, but with even more sophisticated weaponry. Distributed operations give the JFC the capability to overcome the enemy's denial tactics with a significant force, while simultaneously expanding the battlespace.

Integral to the success of distributed operations is the need for precise intelligence. A distributed unit is not just a consumer, but also a producer of intelligence by way of a persistent intelligence, surveillance, and reconnaissance (ISR) capability. Capable of rapidly building a detailed situational understanding of the battlespace through multiple distributed teams, the JFC can exploit a range of options such as conducting time-sensitive precision strikes, maneuver forces against enemy positions, maintain persistent surveillance, or any combination simultaneously and in parallel. Here is where the flexibility, adaptability, and agility of the man in the loop are unmatched.

The use of the ultimate smart sensor and weapon, the well-trained soldier or Marine on the ground, allows the JFC to act quickly on the intelligence gathered by the distributed unit. The importance of the man on the ground becomes even more pronounced as the terrain becomes more forbidding and the enemy more cunning. Vietnam is an excellent example of the difficulty in targeting in the jungle environment against an enemy whose forces are dispersed and well trained in camouflage and deception. Operation ALLIED FORCE is another example of how modern sensors and weapons were defeated by terrain and enemy countermeasures. NATO did not realize how ineffective the bombing operation was until after the Serbs capitulated. The Serbs used numerous dummy positions and decoys to deceive NATO sensors while real equipment was stored in civilian structures and urban areas to avoid the air strikes. By dispersing their equipment throughout the countryside, the

Serbs actually increased their vulnerability to roving distributed units, had they existed at the time.

Effective targeting combined with real time bomb damage assessment gives the JFC an instant measure of effectiveness, the bedrock of effects-based operations. Distributed operations enables the JFC to conduct effects-based operations by linking ISR and fires through a flatter command and control system. Using mission-type orders, a distributed unit can find a target, analyze its importance to the JFC's concept of operations, and destroy it with joint fires or organic weapons much quicker than ever before via the COP. With superior knowledge and situational awareness, the distributed unit can accomplish the JFC's desired effects more rapidly, thereby lowering friendly casualties.

### **THE WAY AHEAD FOR DISTRIBUTED OPERATIONS**

There are a number of problems that must be addressed before distributed operations become a viable and effective concept. The most important is the creation of an approved concept preferably from the Joint Staff. After this, service specific and tactical level problems must be resolved such as training requirements, equipment, logistics and sustainment, medevac issues, and command and control procedures. Despite the growing pains ahead, distributed operations has an excellent opportunity to develop into a true revolutionary concept that will empower the JFC with enhanced capabilities. Like most innovations in the American military, it will be the lieutenants and NCOs who will overcome the obstacles faced by the concept through innovation and creativity. All that is required is the opportunity to experiment and practice.

Distributed operations are a means to fulfill the President's National Security Strategy and the Chairman's National Military Strategy. By addressing the evolution of warfare in the

21<sup>st</sup> Century, distributed operations aim to provide the JFC with a more capable joint force. Future adversaries will continue to strike at us using asymmetrical methods, whether they are small terrorist cells or an aggressive and ambitious China. A netted, distributed unit leverages two of America's strengths, technology and well-trained troops to asymmetrically overcome our enemy's denial and anti-access strategy. Utilizing effects-based operations, the JFC can quickly defeat the enemy by paralyzing his operations and shattering his cohesion with a minimum of forward deployed, expeditionary forces; the revised version of economy of force.

## **APPENDIX A**

The operational concept of distributed operations is currently undergoing experimentation in the Marine Corps. In accordance with Marine Corps Strategy 21, the strategic guidance for the United States Marines Corps for the 21<sup>st</sup> Century, and Joint Vision 2020, the Marine Corps, as the lead agent for the Department of Defense, is evaluating distributed operations and its associated new technologies and capabilities.<sup>19</sup> The Marine Corps Warfighting Lab (MCWL) will conduct an operational assessment of the Distributed Operations concept during the Sea Viking 2006 experiment.<sup>20</sup> In conjunction with the MCWL, the Expeditionary Force Development Center, another department within the Marine Corps Combat Development Command in Quantico, Virginia, is developing the conceptual framework, training, and doctrine for distributed operations. Although an official concept document has not yet been approved, the basic concept is in accordance with the Marine Corps' capstone doctrine, Expeditionary Maneuver Warfare.

A war game, the first formal event of the Sea Viking 2006 Experimentation Campaign, conducted at Quantico, Virginia, explored the implications of deploying a distributed operations capable platoon as part of a 2006 Marine expeditionary unit (special operations capable) (MEU(SOC)).<sup>21</sup> Results were initially favorable, but the questions relating to manpower, training, logistics, and command and control remain. MCWL will use the results to modify upcoming experiments in 2005 and 2006.<sup>22</sup> One proposal within the Marine Corps envisions each Battalion Landing Team deploying within a MEU(SOC) to possess one distributed operations capable platoon. Whether every deployable MAGTF contains a distributed operations capable unit of some type will depend on the results of the SEA VIKING experiments and initial trials within the MEU(SOC).

The Army addresses distributed operations in the context of area of operations (contiguous or noncontiguous) at the brigade level. Unlike the Marine Corps, the Army does not envision small teams scattered throughout the battlefield. The Army considers SOF the ideal units for this type of operation. This difference in philosophy may be a result of the large number of SOF resident within the Army, whereas the Marine Corps has a tradition of using its regular forces in a variety of roles.

The new modular forces the Army is developing will enable the new UE<sub>x</sub> (unit of employment, approximately brigade size) to disperse its subordinate UAs (units of action) over a larger area while maintaining mutual support. The UAs can be infantry, artillery, armor, aviation, or support units. The concept of mutual support will dictate the distance between the UAs.

### Contiguous and Non-Contiguous Areas of Operations

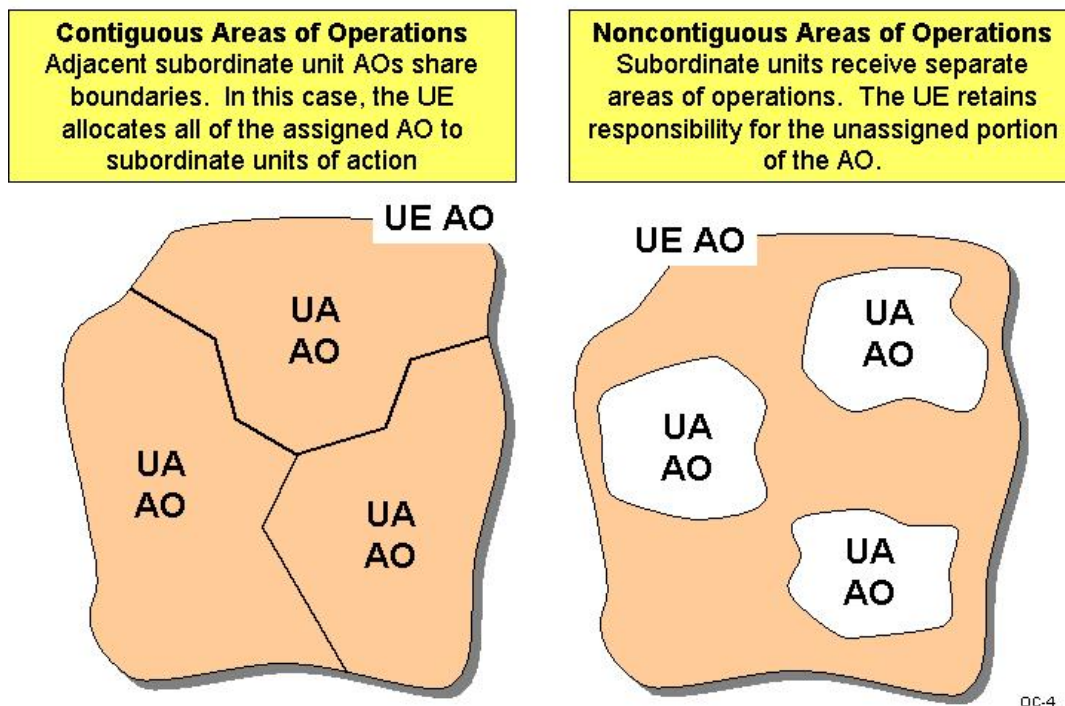


Figure 1: Contiguous and Noncontiguous areas of operation<sup>23</sup>

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## ENDNOTES

<sup>1</sup> President, The National Security Strategy of the United States of America (Washington, DC: September 2002), 29.

<sup>2</sup> Chairman of the Joint Chiefs of Staff, The National Military Strategy of the United States of America, (Washington, DC: 2004), iii.

<sup>3</sup> Ibid, iv.

<sup>4</sup> Frank G. Hoffman and Robert E. Schmidle, "Commanding the Contested Zone," U.S.Naval Institute Proceedings, (September 2004): 49.

<sup>5</sup> Thomas P.M. Barnett, "The New Pentagon Map," Esquire, (March 2003): 174.

<sup>6</sup> Robert E. Schmidle, "Distributed Operations: From the Sea," Marine Corps Gazette, (July 2004): 37.

<sup>7</sup> Chief of Staff of the United States Army, Operations, Field Manual 3-0 (Washington, D.C.: 14 June 2001) 7-28.

<sup>8</sup> Commandant of the Marine Corps, "CMC Policy on Non-Aviator Terminal Control of Close Air Support – ALMAR 028/03," All Marine Messages, 07 May 2003, <http://www.usmc.mil/almar.htm> [30 November 2004].

<sup>9</sup> James J. Schneider, "The Loose Marble – and the Origins of Operational Art," Parameters, (March 1989): 89.

<sup>10</sup> Joint Chiefs of Staff, An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution in the 21<sup>st</sup> Century, (Washington, DC: 28 January 2003), 9.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid, 21.

<sup>13</sup> Joint Chiefs of Staff, Doctrine for Joint Operations, Joint Pub 3-0, (Washington, DC: 10 September 2001), A-1.

<sup>14</sup> Chairman of the Joint Chiefs of Staff, The National Military Strategy of the United States of America, (Washington, DC: 2004), 2-3.

<sup>15</sup> Ibid, 5.

<sup>16</sup> Joint Chiefs of Staff, An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution in the 21<sup>st</sup> Century, (Washington, DC: 28 January 2003), 21.

<sup>17</sup> Richard G. Davis, On Target: Organizing and Executing the Strategic Air Campaign Against Iraq (Washington, DC: Air Force History Museums Program 2002), 307.

<sup>18</sup> Michael R. Gordon, and General Bernard E. Trainor, The Generals' War (Boston: Little, Brown and Company, 1995), 345.

<sup>19</sup> James L. Jones, Marine Strategy 21, (2004): 1.

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<sup>20</sup> The SEA VIKING Division, Marine Corps Warfighting Lab, "Marine Air-Ground Task Force Distributed Operations," Marine Corps Gazette, (October 2004): 34.

<sup>21</sup> Matthew T. Robinson, "Challenges of Military Experimentation," Marine Corps Gazette, (January 2005): 19.

<sup>22</sup> Ibid.

<sup>23</sup> Michael D. Burke, "Unit of Employment (UE) Operations - Version 3.0," (Unpublished White Paper, Combined Arms Doctrine Directorate, Fort Leavenworth, KS: 20 March 2004), 45.

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## Bibliography

- Barnett, Thomas P. M. "The Pentagon's New Map." Esquire, (March 2003): 147-179; 227-228.
- Berry, John C., Jr. "The SEA VIKING Experimentation Campaign." Marine Corps Gazette, (September 2004): 34-38.
- Burke, Michael D. "Unit of Employment (UE) Operations - Version 3.0," Unpublished White Paper, Combined Arms Doctrine Directorate, Fort Leavenworth, KS: 20 March 2004.
- Chairman of the Joint Chiefs of Staff. National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow. Washington, DC: 2004.
- Chief of Staff of the United States Army. Operations. Field Manual 3-0. Washington, D.C.: 14 June 2001.
- Clark, Vern. "Sea Power 21: Projecting Decisive Joint Capabilities." U.S. Naval Institute Proceedings, (October 2002): 32-41.
- Commandant of the Marine Corps. "CMC Policy on Non-Aviator Terminal Control of Close Air Support – ALMAR 028/03." All Marine Messages. 07 May 2003. <http://www.marines.mil/almars/anmar2000.nsf/almars> [30 November 2004].
- Davis, Richard G. On Target: Organizing and Executing the Strategic Air Campaign Against Iraq. Washington, DC: Air Force History Museums Program, 2002.
- Dawson, Cutler and John Nathman. "Sea Strike: Projecting Persistent, Responsive and Precise Power." U.S. Naval Institute Proceedings, (December 2002): 54-58.
- Dobson, Robert K., Jr. "The Distributed Operations Hurdle." Marine Corps Gazette, (October 2004): 32-33.
- Gordon, Michael R. and General Bernard E. Trainor. The Generals' War. Boston: Little, Brown and Company, 1995.
- Hanlon, Edward, Jr. "Distributed Operations: The Time is Now." Marine Corps Gazette, (July 2004): 36.
- Hoffman, Frank G. and Robert E. Schmidle. "Commanding the Contested Zone." U.S. Naval Institute Proceedings, (September 2004): 49-54.
- Jones, James L. Expeditionary Maneuver Warfare: Marine Corps Capstone Concept. Washington, DC: 2000.
- \_\_\_\_\_. Marine Corps Strategy 21. Washington, DC: 2000.
- Lackey, Sue A. "Gangle: New Threats Demand Thinking Outside the Box." Seapower Magazine, (December 2004): 36-39.
- \_\_\_\_\_. "Initial Look at Distributed Operations Reveals Potential and Problems." Sea Power Magazine, (December 2004): 34-35.



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- Mayo, Richard W. and John Nathman. "ForceNet: Turning Information into Power." U.S. Naval Institute Proceedings, (February 2003): 42-46.
- Mullen, Mike. "Global Concept of Operations." U.S. Naval Institute Proceedings, (April 2003): 66-69.
- Robinson, Matthew T. "Challenges of Military Experimentation." Marine Corps Gazette, (January 2005): 16-19.
- Schmidle, Robert E. "Distributed Operations: From the Sea." Marine Corps Gazette, (July 2004): 37-41.
- Schneider, James J. "The Loose Marble – and the Origins of Operational Art." Parameters, (March 1989): 85-99.
- The SEA VIKING Division, Marine Corps Warfighting Lab. "Marine Air-Ground Task Force Distributed Operations." Marine Corps Gazette, (October 2004): 34-36
- U.S. Joint Chiefs of Staff. An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution in the 21<sup>st</sup> Century. Washington, DC: 28 January 2003.
- U.S. Joint Chiefs of Staff. Doctrine for Joint Operations. Joint Pub 3-0. Washington, DC: 10 September 2001.
- U.S. Joint Chiefs of Staff. Joint Vision 2020. Washington, DC: June 2000.
- U.S. President. The National Security Strategy of the United States of America. Washington, DC: 2002.